

field for determining the position and orientation of said catheter, said signals being used to generate position and orientation coordinates, and a drug delivery device for delivering said cell, the system also comprising control circuitry for determining position and orientation coordinates of a distal end of said catheter and for generating a viability map of said heart comprising a site suitable for targeted therapy by said catheter;

generating the viability map of the heart;

identifying said site suitable for targeted therapy on said viability map;

inserting said catheter into a chamber of said heart at said site;

delivering said cell to said site with said drug delivery device based on position and orientation coordinates in response to said signals from said position sensor, and inducing angiogenesis or myogenesis in said site of said heart from said delivered cell.

---

Claim 5. (Amended) The method according to Claim 4, including assessing the viability of said heart with said viability map of said heart.

Claim 6. (Amended) The method according to Claim 5, including identifying an ischemic zone of said heart on said map as the site suitable for targeted therapy.

Claim 7. (Amended) The method according to Claim 6, including determining a delivery site within said ischemic zone.

---

Claim 9. (Amended) The method according to Claim 5, including identifying an infarct region of said heart on said map as the site suitable for targeted therapy.

Serial No. 09/379,540

Claim 10. (Amended) The method according to Claim 9, including determining a delivery site at said infarct region.